

ABSTRACT

A titanium substrate having a thickened outer oxidation layer provided thereon by a treatment process performed either in an air atmosphere at elevated temperatures or through electrolytic oxidation (anodization), is described. The thusly conditioned titanium substrate serving as a cathode current collector for an electrode incorporated into an electrochemical cell exhibits improved electrical performance in comparison to the prior art techniques, i.e., electrically conducted carbon coated titanium screen and use of highly corrosion resistant materials, upon subsequent elevated temperature exposure.